International Journal of Business and General Management (IJBGM) ISSN(P): 2319-2267; ISSN(E): 2319-2275 Vol. 4, Issue 6, Oct - Nov 2015, 49-56 © IASET



ANALYSIS OF CHANGES IN OVERCONFIDENCE BAIS OF STOCK MARKET TRADERS IN INDIAN STOCK MARKET

SHINIL SEBASTIAN¹ & SAM THOMAS²

¹Research Scholar, Christ University Bangalore, India ²Assistant Professor, Cochin University, India

ABSTRACT

The study investigates the changes in overconfidence bias of investors in the Indian Stock Market. In other words, it analyses the variances in the overconfidence level of investors, when changes in the level of experiences in the stock market, profession, gender, mode of trading, annual income, portfolio size etc. For this purpose, a questionnaire was developed and distributed to 385 individual investors chosen by different brokers' firms present in the Indian Stock Exchange. Overconfidence is the overestimation of precision of knowledge in a particular field, here it is financial market. Overconfidence bias can find out by analyzing any of variant like miscalbration, better than average effect or illusion of control. We measured the overconfidence bias by analyzing the better than average effect and illusion of control. The use of one-way ANOVA allowed us to identify the overconfidence bias is varying according to the changes happening in the some of the basic demographic factors of respondents. Result shows that changes in the level of education, experience in the stock market and mode of trading can change the level of overconfidence of stock market traders. The factors like gender, profession, annual income, portfolio size doesn't affect the level of overconfidence of stock market traders.

KEYWORDS: Better than Average Effect, Illusion of Control, Overconfidence, Stock Market Traders

INTRODUCTION

The literature of several disciplines, like psychology, finance, and economics, claims that people are generally overconfident. DeBondt and Thaler [1995] state that "perhaps the most robust finding in the psychology of judgments is that people are overconfident." A large number of studies have been conducted in the area of behavioral finance to identify the factors that leads to take financial decision especially in the area of stock investments and decision related to buy or sell stocks in the stock market and frequency of trading etc. These studies are conducted to analyses the psychological biases, which affects individual investors' decision in the stock market and subsequently their decisions. Such biases include: overconfidence, home bias, sensation seeking attitude, competence effect, herding, anchoring, heuristics, etc. This study is trying to find out whether stock market traders have overconfidence bias or not. Overconfidence is the overestimation of precision of knowledge or skills in a particular area, here it is financial market. Most of the studies used the different proxies for overconfidence, when they use market data, use quite crude proxies for overconfidence such as. gender, past returns, size of the investor, investor competency, market volume etc. But the present study is tried to measure the investor overconfidence by analyzing a person on the basis of *overplacing* himself relative to other(Better than average) and illusion of control. Overconfidence is the one of the behavioral aspects of a human being, it can be changed according to his knowledge, experience, income profession etc. Stock market traders are taking financial decisions very frequently. It is very important to understand how emotions of human beings lead to irrational behavior in financial investment decision

50 Shinil Sebastian & Sam Thomas

making. The study about Behavioral finance identifies how investors actually behave in financial decision making. Behavioral finance is a study to how psychology affects the financial decision making. It formed with some standard tools as like traditional finance. But different tools are adopted in behavioral finance especially different attitudes towards risk, risk aversion, imperfect self control etc (Statman, 1999). Every human being have emotional and cognitive weakness. Traditional and standard finance are not considered the different behavioral biases of human being. Behavioral finance examines how investors are actually behaved in financial settings. (Nofsinger 2002). Behavioral finance is a use of psychology to financial decision making and it is based on human beings irrational decision making in the financial investments. If emotions and psychological biases comes to investment decision, this can leads to serious loss or harm to the investors wealth. (Kehreman and Riepe 1998) reported that investors those who addicted to these behavioral biases will take more risks and do more unjustified trade in stock market. Behavioral finance is an attempt to find out and understand from the human psychological phenomena, how these behaviors work in financial markets and within individual investors.

Severl studies in the areas of behavioral finance related to overconfidence say that this is one of most important bias and behavior of stock market traders. Overconfident investors are active and high volume traders in the stock market. The study investigates the changes in overconfidence bias of investors in the Indian Stock Market. In other words, it analyses the variances in the overconfidence level of investors, when changes in the level of experiences in the stock market, profession, gender, mode of trading, annual income, portfolio size etc.

RELATED LITERATURE AND HYPOTHESIS

Overconfidence is "the tendency of people to unwittingly give too much weight to the assessment of his/her knowledge and accuracy of information possessed and ignore the public information available" (Lichtenstein and Fischhoff, 1977). In the finance literature, overconfidence is usually defined as overestimating the precision of information about the value of a financial security (Kyle and Wang, 1997, Odean, 1998, Gervais and Odean, 2001). It is tendency to give more weight to one's abilities and believes. Overconfidence has three variants Miscalibration, better than average effect and illusion of control. Thus overconfidence is the tendency of overestimating one's own abilities, knowledge, skills and information on particular area, here it is financial market.

Literature Related to Antecedents of Overconfidence

Grift Tversky(1992) reported that experts those who have good financial knowledge they are more overconfident than those who got less experience in financial market and knowledge about stock market. Presson and Banassi (1996) documented that overconfidence occurs when there are more choice, task familiarity, competition and active involvement. Odean and Gervias (2001) studied how traders learn about their abilities and these believe can create overconfidence. In their model trader's level of confidence will change with his past success and failures. Gervais and Odean (2001) put forward that during bull markets, individual investors will attribute too much of their success to their own abilities, which makes them even more overconfident. Daniael and Gur (2005) investors who think they have good knowledge about financial securities hold better diversified portfolio and those who think they are more knowledgeable than average investor they trade more, means frequently change their portfolio. Deaves et al (2005) reported that more experienced traders are seems to be more overconfident. Dorn and Huberman (2005) by combining survey response and trading details of investors found that risk aversion is most important determinants of both diversification and turnover of the portfolio. More risk tolerant investor holds less diversified portfolio and trade aggressively, less experienced also churn poorly diversified and those who think themselves more knowledgeable than the average investor change their portfolios more.

Impact Factor (JCC): 3.9876 NAAS Rating: 2.97

Stateman (2006) Past returns from the market make some investors overconfident and this leads to high turnover or volume in the market. Investors' overconfidence and trading volume can vary with past returns. Glaser and Weber (2007) are those who think they are above average in terms of investment skills trade more and measures of miscalibration is not related to trading volume. Durand et al (2008) Individuals who had higher negative emotion, higher risk-taking propensity and more openness to experience opted for higher portfolio risk and associated with increased trading behavior, investors who were more extraverted were found to have a lower propensity to trade. Lin et al (2010) analyzed the effect of online trading on investors' trading behavior found those who got higher income from previous trades makes them to go for online trading and give overconfidence. After going online annual turnover rate and trading frequency have been increased even then also trading performance not gone negatively. Park (2012) found that confirmation bias of the stock market traders increase overconfidence. Fuertes et al(2012) finance professional and married investors placing high volume trade because they are overconfident.

DATA AND METHODOLOGY

We use the survey method to measure the overconfidence and drivers of overconfidence. Survey methods allow this study to construct proxies of trait that have been previously identified as drivers of overconfidence such as an investor's perceived control over his investments (illusion of control) or his tendency to rate himself to others than little higher (Better than average). The Overconfidence (OC) of the respondents measured with help of average score of two variant of overconfidence, better than average and illusion of control. This study is purely based on the primary data collected by using the structured questionnaire. The Questionnaire is prepared and used five-point Likert scale to measure each variable. Most of the questions are adopted from previous research of Daniel and Gur (2005). Standard questionnaire has developed to measure the profile of respondent and distributed to 500 stock market traders in Kerala.385 response collected back as completely filled. We have used the ANOVA for analyzing the changes in overconfidence level.

RESULTS AND DISCUSSIONS

First the study has analyzed and tested whether respondents are overconfident or not by taking the average score of responses to the questions related to better than average and illusion of control. The average score for this test was 3.71. So study concludes that stock market traders are overconfident. So the first hypothesis accepted.

Table 1: Profile of the Respondents

Demographic Variables		N	%
Gender	Male	343	89.09
Gender	Female	42	10.91
	20 – 30	78	20.26
	30- 40	131	34.03
Age	40 – 50	62	16.10
	50 -60	49	12.73
	60 above	65	16.88
	Less than college	25	6.49
Education	College	163	42.34
	Post graduate	174	45.19
	PhD	11	2.86
	Others	12	3.12
Experience	Less than 1 year	49	12.73
	1-3 years	69	17.92

52 Shinil Sebastian & Sam Thomas

	3 to 5 years	49	12.73
	5 to 10 years	92	23.90
	10 to 15 years	61	15.84
	More than 15	65	16.88
	years	0.5	
	Less than 200000	166	43.12
	200000- 400000	121	31.43
Income	400000-600000	56	14.55
	600000-800000	12	3.12
	More than 800000	30	7.79
	Retired	82	21.30
	House wife	12	3.12
	Self employed	70	18.18
	Student	27	7.01
Job	Finance	92	23.90
	profession	92	
	Engineer	14	3.64
	Teaching	24	6.23
	Professional	64	16.62
	In person with advisor or broker	167	43.38
Mode of trading	Internet or mobile	117	30.39
	Telephone with	101	26.23
	advisor or broker	101	
	Less than 200000	229	59.48
Portfolio Size	200000 to 500000	123	31.95
	500000-800000	9	2.34
1 OI HOHO SIZE	800000-1000000	12	3.12
	More than 1000000	12	3.12

Table 2: Relationship between Overconfidence Bias and Demographic Factors

	Overconfidence				
		Mean	SD	F	Sig.
Gender	Male	3.70	0.66	0.118	0.731
Gender	Female	3.74	0.73		
	20 – 30	3.73	0.64	0.745	0.562
	30-40	3.69	0.82		
Age	40 – 50	3.59	0.60		
	50 -60	3.76	0.45		
	60 above	3.78	0.54		
	Less than college	3.13	0.80	5.644	0.000
	College	3.74 ₃	0.60		
Education	Post graduate	3.752	0.70		
	PhD	3.961	0.48		
	Others	3.68	0.48		
	Less than 1 year	3.35	0.80	5.929	0.000
	1-3 years	3.60	0.76		
Experience in stock market	3 to 5 years	3.57	0.87		
	5 to 10 years	3.852	0.39		
	10 to 15 years	3.823	0.60		
	More than 15 years	3.88_{1}	0.51		
	Less than 200000	3.62	0.65	2.307	0.058
Income	200000-400000	3.71	0.70		
	400000-600000	3.76	0.75		

	600000- 800000	3.87	0.29		
	More than 800000	3.99	0.48		
	Retired	3.75	0.48	0.817	0.574
	House wife	3.54	0.72		
	Self employed	3.63	0.76		
Job	Student	3.75	0.73		
300	Finance profession	3.81	0.71		
	Engineer	3.69	0.55		
	Teaching	3.61	0.53		
	Professional	3.63	0.74		
Mode	In person with advisor or broker	3.722	0.55	4.195	0.016
	Internet or mobile	3.821	0.65		
	Telephone with advisor or broker	3.56	0.83		
Portfolio size	Less than 200000	3.66	0.72	1.468	0.211
	200000 to 500000	3.80	0.60		
	500000-800000	3.41	0.61		
	800000- 1000000	3.83	0.29		_
	More than 1000000	3.76	0.49		

From the above table it is easily can understand that education, experiences in stock market and mode of trading are the important factors to vary the overconfidence bias. The p- values are low and significant at 1 % level. These factors are significantly affecting the overconfidence bias of stock market traders'. When level of education changes the level of overconfidence bias also changes. Those who got highest education have high overconfidence. Level of experience also is a significant variable to change the overconfidence level of stock market traders. It is found that when experience in stock market increases the overconfidence also changing. Those who have high education have high overconfidence. Those who opt the trading via online have high overconfidence. It shows that overconfidence biases will changes when trader's method of trading changes.

CONCLUSIONS

The study was to investigate the changes in overconfidence bias when there are changes in basic demographics factors of stock market traders. By using detailed survey among the various investors and stock market traders, researcher has found that the stock market traders have overconfidence bias, most of the respondents thinks that they have good knowledge and they are better than others in terms of stock selection and trading and also feel that when they have control over the events, they can perform better than others. This shows that stock market traders are overconfident. The study found that changes in education, experience in stock market and mode of trading (online, offline, and telephone with broker) also can affect the level of overconfidence. As same findings of Graham (2006), investor competency is the factors for overconfidence. The study shows that when the level of education is increasing the overconfidence bias also increasing and overconfidence among the traders are increasing when their experiences increasing in stock market. The overconfidence biases is more among the traders those who trade by themselves via online or mobile. These findings are consistent with findings of Odean (2001).

REFERENCES

- 1. Barber and odean(2001). The internet and the investor. Journal of economic perspectives 15(1), 41-54.
- 2. Barber, Brad M., and Terrance Odean, 2001. Boys will be boys: Gender, overconfidence, and common stock

54 Shinil Sebastian & Sam Thomas

- investment. The Quarterly Journal of Economics 116, 261-292.
- 3. Barber, Brad M., and Terrance Odean, 2002. Online investors: Do the slow die first? *Review of Financial Studies* 15, 455-487.
- 4. Benos, Alexandros V. (1998). Aggressiveness and Survival of Overconfident Traders. Journal of Financial
- 5. Biais, B., Hilton, D., Mazurier, K., & Pouget, S. (2002). Psychological Traits and Trading Strategies. C.E.P.R.
- 6. Chang, Eric C., Luo, Yan and Ren, Jinjuan(2008), *Investor Overconfidence and the Increase in IdiosyncraticRisk*. Availableat SSRN: http://ssrn.com/abstract=1099269ottp://dx.doi.org/10.2139/ssrn.109926
- 7. Chuang, W., & Lee, B. (2007). An empirical evaluation of the overconfidence hypothesis. *Journal of Banking & Finance*, 35(5), 1575.
- Deaves, Richard, Lueders, Erik and Schröder, Michael, The Dynamics of Overconfidence: Evidence from Stock Market Forecasters (November 2005). ZEW - Centre for European Economic Research Discussion Paper No. 05-083. Available at SSRN: http://dx.doi.org/10.2139/ssrn.868970
- 9. Durand, R., Newby, R., &Sanghani, J. (2008). An Intimate Portrait Of The Individual Investor. *The Journal Of Behavioral Finance*, 9, 193-208
- 10. Garvey, R., & Murphy, A. (2004). Commissions matter: The Trading Behavior Of Institutional And Individual Active Traders. *The Journal of Behavioral Finance*, *5*(4), 214-221
- 11. George Lin, Y., Chiu, C., & Kang, E. (2010). Understanding online traders' behavior: An example from common stock investment in taiwan. *Social Behavior and Personality*, *38*(5), 637-646.
- 12. Gervias, S., & Odean, T. (2001). Learning to be overconfident. *The Review of financial studies Spring*, 14(1), 1-27.
- 13. Glaser, M., & Weber, M. (2003). Overconfidence and Trading volume. Working Paper. [Online] Available:
- 14. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=471925&rec=1&srcabs=957504
- 15. Glaser, M., & Weber, M. (2007). Overconfidence and trading volume. Geneva Risk Insur Rev, 32, 1-32.
- 16. Goswami, C. (2003). How does internet stock trading in India work?. Vikalpa, 28(1),
- 17. Graham, J., Harvey, C., & Huang, H. (2006). Investor Competence, Trading Frequency, and Home Bias. *Working Paper*. [Online] Available: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=620801.
- 18. Grinblatt, M., & Keloharju, M. (2009). Sensation seeking, overconfidence, and trading activity. *The Journal of Finance*, 64(2), 549-578.
- 19. Hsu, Y and Shiu, C.(2007), Investors' Overconfidence in Primary Markets (August 10, 2007). 20th Australasian Finance & Banking Conference 2007 Paper. Available at SSRN: http://ssrn.com/abstract=1009341 or http://dx.doi.org/10.2139/ssrn.1009341
- 20. Organizational Behavior and Human Performance, 20(2), 159-83. doi:10.1016/0030- 5073(77)90001- 0,http://dx.doi.org/10.1016/0030-5073(77)90001-0

- 21. Lee, M. (2009). Predicting and explaining the adoption of online trading: An empirical study in Taiwan. *Decision Support Systems*, 47, 133-142. doi: www.elsevi e r.com/locate/dss
- 22. Lichtenstein, S., & Fischhoff, B. (1977). Do Those Who Know More Also Know More About How Much They *Markets* 1, 353–383. doi:10.1016/S1386-4181(97)00010-4, http://dx.doi.org/10.1016/S1386-4181(97)00010-4
- 23. Odean, Terrance, 1998. Volume, volatility, price, and profit when all traders are above average. Journal of Finance 53, 1887-1934.
- 24. Odean, Terrance, 1999. Do investors trade too much? American Economics Review 89, 1279-1298.
- 25. Park, J., Konana, P., Gu, B., Kumar, A., & Raghunathan, R. (2010.). Confirmation Bias, Overconfidence, and Investment Performance: Evidence from Stock Message Boards. SSRN Electronic Journal SSRN Journal.
- 26. Pompian, M. M. (2006). Behavioral Finance and Wealth Management. John Wiley & Sons Inc. New Jersey.
- 27. Shefrin, Hersh. 2000. Beyond Greed and Fear: Understanding Behavioral Finance and the Psychology of Investing. Boston, Massachusetts: Harvard Business School Press.
- 28. A Singh, Sandhu and Kundu (2010). Investors' Adoption of Internet Stock Trading: A Study. *Journal of Internet Banking and Commerce*, April 2010, Vol. 15, No.1(http://www.arraydev.com/commerce/jibc/)
- 29. Statman, M., Thorley, S., & Vorkink, K. (2003). Investor Overconfidence and Trading Volume. *Working Paper*.
- 30. Statman, Meir. 1999. "Behavioral Finance: Past Battles and Future Engagements." *Financial AnalystsJournal*. 55:18-27.
- 31. Trinugroho, I., & Sembel, R. (2011). Overconfidence and excessive trading behavior: An experimental study. *International Journal of Business and Management*, 6(7),
- 32. Uchida, K. (2006). The characteristics of online investors. The Journal of Behavioral Finance, 7(3), 168-177.
- 33. Wood, R., & Zaichkowsky, J. (2004). Attitudes and trading behavior of stock market investors: A segmentation approach. *The Journal of Behavioral Finance*, *5*(3), 170-179.
- 34. Yung, K., & Liu, Y. (2009). Implications of futures trading volume: Hedgers versus speculators. *Journal of Asset Management*, 10(5), 318-337. Retrieved from www.palgrave-journals.com/jam/
- 35. Zaiane, S., & Abaoub, E. (2009). Investor overconfidence and trading volume: The case of an emergent market. *International Review of Business Research Papers*, 5(2), 213-222. http://ethicsunwrapped.utexas.edu/videos/over-confidence-bias/